REMARKS/ARGUMENTS

In the Office Action, claims 1 to 5, 7, 8, 11 to 14, and 16 to 19 were rejected under 35 U.S.C. 102(e) as being anticipated by United States Patent 6,535,513 to Kao.

An anticipation objection under 35 U.S.C. 102 requires that a reference teach every aspect of an invention as recited in the claims. It is respectfully submitted that Kao does not teach all of the limitations of the rejected claims, as discussed in further detail below.

Referring first to claim 1, this claim recites details of a data path, in particular:

> a data path extending from the first bus interface to the lookup circuitry, and from the lookup circuitry to the segmentation circuitry, and from the segmentation circuitry to the reassembly circuitry, and from the reasssembly circuitry to the second bus interface, wherein both cell-protocol traffic and packet-protocol traffic pass over the data path from the first bus interface, through the lookup circuitry, through the segmentation circuitry, through the reassembly circuitry and out of the integrated circuit from the second bus interface.

Kao does not disclose any such data path. Although the Office Action refers to Figure 6 and column 11, line 30 to column 12, line 3 of Kao, Figure 6 and the referenced passage of Kao merely generally describe the VC controller 608, the SAR engine 610, the VC queues 612, and the multi-service engine 614. No specific details of a data path, internal components, or interconnections between such components have been disclosed in Kao.

Claim 1 also recites a feature of "the lookup circuitry analyzing the cell-protocol traffic and outputting information that causes the cell-protocol traffic to be processed in a first way by the segmentation circuitry and the reassembly circuitry". Although Kao indicates that the multi-service engine 614 performs service functions based on header lookup (column 11, lines 41 to 45), there is absolutely no disclosure of lookup circuitry which analyzes cell-protocol traffic and outputs information that causes the cell-protocol traffic to be processed in a first way by segmentation circuitry and reassembly circuitry. Kao discloses only that ATM cells are queued

to the appropriate VC queues 612. Kao does not disclose or suggest that the multi-service engine 614, which supposedly incorporates lookup circuitry according to the Office Action, outputs any sort of information that causes cell-protocol traffic to be processed in a first way by the SAR engine 610.

Kao similarly fails to disclose or suggest "lookup circuitry analyzing the packet-protocol traffic and outputting information that causes the packet-protocol traffic to be processed in a second way by the segmentation circuitry and the reassembly circuitry".

Regarding claims 2 and 3, each of these claims depends from claim 1 and thus distinguishes over Kao for at least the reasons discussed above. These claims also recite that the integrated circuit of claim 1 is operable in first and second ingress and egress modes for exchanging traffic with a cell-based switch fabric and a packet-based switch fabric. Kao does not disclose or suggest that the VC controller 608, or any other components of the narrowband line cards or switch apparatus for that matter, could be used in conjunction with a packet-based switch fabric.

Claim 5 also recites a packet-based switch fabric.

Rejected claim 4 depends from claim 1 and thus distinguishes over Kao for at least the reasons discussed above regarding claim 1.

Turning to claim 7, this claim recites memory manager circuitry. According to the claim, the data path extends from the segmentation circuitry to the reassembly circuitry via the memory manager circuitry. In the Office Action, reference is made to the SAR engine 610 which, according to the Office Action, performs segmentation and reassembly of data and manages the scheduling of data forwarding from/to the VC queues 612. However, there is no disclosure or suggestion in Kao that any scheduling feature of the SAR engine 610 comprises memory manager circuitry which is connected between segmentation circuitry and reassembly circuitry, as recited in claim 7. Thus, Kao does not disclose the memory manager circuitry defined in claim 7.

Claim 8 depends from claim 1 and distinguishes over Kao for at least the same reasons as claim 1.

Turning now to independent claim 11, this claim recites a switching device comprising a first multi-service segmentation and reassembly (MS-SAR) integrated circuit, a switch fabric, and a second MS-SAR integrated circuit. Claim 11 has also been amended to incorporate features from claim 13, which has been cancelled.

Thus, claim 11 as amended recites that the switching device can process a flow such that an ATM cell is received onto the first MS-SAR and output from the second MS-SAR encapsulated in a packet, there being only one ATM cell encapsulated in the packet.

At least this single-cell encapsulation feature of claim 11 has not been disclosed in Kao. Although the Office Action refers to Table 1 of Kao as indicating that an ATM cell can be encapsulated into a packet, the mere mention of encapsulating ATM cells into packets does not disclose the claimed limitation of encapsulating a single cell into a packet. As would be known to a person skilled in the art, packets typically encapsulate multiple ATM cells.

Claim 11 as amended recites a switching device which specifically processes a flow such that a packet incorporates only one ATM cell. Unlike in Kao, this is a particular processing feature carried out according to an embodiment of the present invention, and not just a side-effect of receiving only one ATM cell in a received traffic flow.

It is therefore believed that claim 11 distinguishes over Kao for at least the above reasons. Dependent claims 12, 14, and 16 depend from independent claim 11, and also distinguish over Kao for at least these reasons.

Independent claim 17 has been amended to incorporate features previously recited in claim 19, which has been cancelled. Claim 17 now recites that a flow is received from one of a plurality of input ports, each having a port identification number. The claim also recites that the MS-SAR has, for each of the input ports, access to locating information on where in a flow received on that input port an indication of application type would be located. According to the claim, the MS-SAR uses the port identification number of a flow to access the locating information, and uses the locating information to locate in the flow the indication of application type.

In rejected former claims 17 to 19, the Office Action relies on a general reference in Kao to the multi-service engine 614 performing service functions based on header lookup (claim 11, lines 40 to 45). Independent claim 17 as amended does not recite merely a general header lookup function. The claim specifically defines a port identification number, and features associated with using that port identification number to determine how a received flow is to be processed. These features are simply not disclosed or even suggested in Kao.

Claim 18 depends from claim 17 and distinguishes over Kao for similar reasons.

It is thus respectfully submitted that claims 1-5, 7, 8, 11, 12, 14, and 16 to 18 recite features which have not been disclosed in Kao. The cited reference therefore does not anticipate these claims, and accordingly reconsideration and withdrawal of the anticipation rejection under 35 U.S.C. 102(e) are respectfully requested.

Claims 6 and 15 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kao in view of United States Patent 6,795,445 to Kabie.

The rejection of claims 6 and 15, although based on the combination of Kao and Kabie, is predicated upon the supposed anticipation of independent claims 1 and 11, from which claims 6 and 15 respectively depend, by Kao. As discussed in detail above, however, Kao does not disclose all of the limitations of the independent claims 1 and 11. The deficiencies of Kao in respect of the independent claims 1 and 11 are not remedied by Kabie, which is relied upon to demonstrate internetworking between ATM, FR, IP, and MPLS networks.

Therefore, the combination of Kao and Kabie does not disclose all of the limitations of claims 6 and 15, as is required for establishing a *prima facie* case of obviousness. It is respectfully requested that the obviousness objection be withdrawn.

It is further noted that Kabie has a filing date of October 27, 2000, which is later than the March 30, 2000 filing date of 7 of the 8 patent applications from which the present application claims priority. At the very least, this casts significant uncertainty on the citability of Kabie in respect of the present application. Applicant hereby expressly reserves the right to challenge the citation of Kabie on these grounds during further examination of the present application, if

necessary.

The remaining claims 9 and 10 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Kao in view of United States Published Patent Application 2002/0101871 of Takase.

Although page 11 of the Office Action asserts that it would have been obvious to one of ordinary skill in the art to modify the switching apparatus of Kao by generating and checking a segmentation trailer for packets converted in cells as shown by Takase, Applicant respectfully disagrees with this conclusion.

As noted, for example, in the Abstract of Takase, the object of Takase is to accommodate local connectionless information in an ATM network. The Office Action proposes that the very detailed solution to a specific problem, as presented in Takase, can simply be carried into Kao for the general purpose of checking packet segments during segmentation and reassembly.

It is respectfully submitted that, given the specific and targeted objective of the solution proposed in Takase, there is a lack of proper motivation to combine Takase with Kao in the manner suggested in the Office Action.

It is further noted that, even if the teachings of Kao were combined with those of Takase, one would not arrive at the invention as recited in independent claim 9. For example, claim 9 specifies that a data path extends from a first bus interface to means for generating a segmentation trailer, and from the means for generating to means for checking a segmentation trailer, and from the means for checking to a second bus interface, wherein both cell-protocol traffic and packet-protocol traffic pass over the data path from the first bus interface, through the means for generating, through the means for checking, and out of an integrated circuit from the second bus interface. Neither the claimed data path, nor the passing of both cell-protocol traffic and packet-protocol traffic through this data path, have been disclosed in Takase, which according to the Office Action allegedly discloses segmentation trailer-related features.

Since Kao does not disclose a segmentation trailer at all, as indicated in the Office Action, it is respectfully submitted that a person skilled in the art could not be led to modify Kao

to include segmentation trailer generating and checking functions, and to also at the same time, modify the teachings of Takase to provide these functions in a single data path which carries both cell-protocol and packet-protocol traffic.

Accordingly, Applicant respectfully submits that a *prima facie* case of obviousness has not been established in respect of claims 9 and 10. At least independent claim 9, and claim 10 by virtue of its dependency from claim 9, incorporate features which have not been disclosed in the combination of Kao and Takase. In addition, there is no motivation to combine the teachings of these references in the manner suggested in the Office Action.

A minor additional amendment has been to claim 10 in the enclosed listing of claims. In the previous listing of claims, it appeared as though the double occurrence of the term "checking" was a typographical error, and thus one occurrence of this term was deleted. Upon further review of claim 10, it was noted that claim 10 in its previous form was correct, and therefore the previous version of claim 10 has been restored.

In view of the foregoing, early favorable consideration of this application is earnestly solicited.

Respectfully submitted,

BIDYUT PARRUCK, ET AL

By _____
Ralph A. Dowell
Reg. No. 26,868

Date: October 28, 2005

DMW:acb